

# Rhodora

JOURNAL OF

THE NEW ENGLAND BOTANICAL CLUB

---

Vol. 20.

June, 1918.

No. 234

---

## NOTES ON THE FLORA OF NEW BRUNSWICK.

S. F. BLAKE.

THE plants recorded in the following list were collected by the writer during some seven weeks of the late summer of 1913 spent collecting for the Gray Herbarium along the coastal sands of New Brunswick and the adjacent small islands. The period from 12 August to 3 September was spent at Bathurst on Bay Chaleur on the northern coast of the province, with side trips extending to Petit Rocher to the west, Miscou Island to the east, and the Drummond Iron Mine near Great Falls some distance in the interior from 4 September to 29 September at Chatham and Newcastle, on the Miramichi River, whence excursions were made to Tracadie on the north, Richibucto on the south, and the islands along the mouth of the Miramichi River. The last day's collecting in New Brunswick was done on 30 September at Moncton, on the Petitcodiac River.

The region about Bathurst consists largely of glacial sands and gravels. A mile or two inland extensive "blueberry barrens" are met with, having such representative species as *Lycopodium tristachyum*, *Pinus Banksiana*, *Betula alba* var. *papyrifera*, *Myrica asplenifolia*, *Salix humilis*, *Vaccinium canadense*, *V. pensilvanicum*, and *V. pensilvanicum* var. *nigrum*. The coastal rocks are largely indurated clays and sandstones. At Petit Rocher there is a deposit of limestone, and in a nearby bog or its vicinity were collected such characteristic calciphiles as *Carex aurea*, *Spiranthes Romanzoffiana*, *Salix candida*, *Betula pumila*, *Ranunculus Purshii*, *Parnassia caroliniana*, *Pyrola asarifolia*, and *Valeriana uliginosa*. Along the sands of the coast, from Miscou Island southward, *Myrica carolinensis*, *Betula populi-*

*folia*, *Euphorbia polygonifolia*, *Hudsonia tomentosa*, *Lechea intermedia*, and *Teucrium canadense* var. *littorale*, with various other species, find their northern limit, and in the brackish tidal flats of the Miramichi River *Lophocarpus spongiosus* and *Samolus floribundus*. The only strictly endemic flowering plants at present known from the province are apparently *Aster laurentianus* Fernald var. *contiguus* Fernald and *A. subulatus* Michx. var. *obtusifolius* Fernald.

LYCOPIDIUM TRISTACHYUM Pursh. Blueberry barrens, Bathurst (*Blake* 5419); Loggieville (5610); Newcastle (5659); in pine woods, Portage Island (5685); St. Louis de Kent (5725). I also found specimens collected by Cox in "sandy barrens behind Chatham, 1897," in the herbarium of the Miramichi Natural History Society at Chatham.

LOPHOTOCARPUS SPONGIOSUS (Engelm.) J. G. Sm. Brackish tidal mud, French Fort Cove, Miramichi River, Newcastle (5625); brackish tidal mud, mouth of Barnes Creek, two miles above mouth of Moulies River (5731). Recorded (as *Sagittaria calycina* var. *spongiosa*) in Fowler's list<sup>1</sup> (p. 67) from "near the head of the tide in the Richibucto River, and at Rothesay, *Fowler*, Herb.; Tobique River, *Hay*." Specimens collected by Fowler at Bass River, 28 July 1870, are in the Gray Herbarium.

DIGITARIA ISCHAEMUM Schreb. (*D. humifusa* Pers.: see Hubbard, RHODORA xviii. 231 (1916).) Along Intercolonial Railway, Petit Rocher (5489).

PANICUM SUBVILLOSUM Ashe. Bathurst (5383); sandy beach, Miscou Harbor (5570). The only *Panicum* found. Recorded by Hitchcock & Chase (Contr. U. S. Nat. Herb. xv. 228 (1910)) from Kent County, 1875, *Fowler*; also at Shediac Cape, 23 July 1914 *Hubbard* 716.

SETARIA VIRIDIS (L.) Beauv. var. WEINMANNI (R. & S.) Brand. (See Fernald & Wiegand, RHODORA xii. 133-134 (1910).) Along Intercolonial Railway, Petit Rocher (5488).

SCIRPUS CAMPESTRIS Britton var. FERNALDII (Bicknell) Bartlett. Brackish sands, Miscou Harbor (5584). New to the province, and a considerable range extension.—Our common form, var. *paludosus* (A. Nels.) Fernald, was also collected at Bathurst (5427) and on Bay du Vin Island in Miramichi Bay (5706), and a form approaching

<sup>1</sup> Rev. James Fowler, A Preliminary List of the Plants of New Brunswick (Nat. Hist. Soc. of N. B. Bull. no. IV). St. John, N. B. 1885. Pages [1]-82.

var. *novae-angliae* (Britton) Fernald was collected with the last (5707).

**Juncus alpinus** var. **insignis** × **brevicaudatus**, hybr. nov. Planta habitu floribus etc. *J. alpino* var. *insigni* similis, staminibus tantum 3 *J. brevicaudati* donata.—Mud hole, Petit Rocher, 21 August 1913, Balke 5509.

A plant combining the general characters of *Juncus alpinus* Vill. var. *insignis* Fries with the three stamens of *J. brevicaudatus* (Engelm.) Fernald, and probably to be considered a hybrid between them. Both the presumed parents were collected at Bathurst and doubtless occur throughout the region, where no other species of this immediate group was met with.

**JUNCUS EFFUSUS** L. var. **COMPACTUS** Lej. & Court. (See Fernald & Wiegand, RHODORA xii. 84 (1910).) Roadside ditch, Richibucto (5730).

**JUNCUS EFFUSUS** L. var. **PYLAEI** (Laharpe) Fernald & Wiegand, l. c. 92. Pasture, Grande Anse (5534).

**JUNCUS EFFUSUS** L. var. **SOLUTUS** Fernald & Wiegand, l. c. 90. Roadside ditch, Richibucto (5729).

**MYRICA CAROLINENSIS** Mill. Grande Plaine, Miscou Island (5593); Portage Island (5669); Fox Island (5688); Richibucto (5711); Kouchibouguac (5726). Recorded (as *M. cerifera*) in Fowler's list (p. 56) from "sand beach on the sea shore, Kent and Northumberland [Counties], Fowler; Petitcodiac, *Brittain*." Also seen by Prof. Fernald from Kouchibouguac (herb. N. B. Nat. Hist. Soc.) and by the writer from Restigouche, *Hay* (herb. Miramichi Nat. Hist. Soc.); and in the Gray Herbarium from Miscou Island, 1905, *Ganong*; Fox Island, 1892, *Fowler*; Brulé, 1914, *Hubbard*.

**BETULA POPULIFOLIA** Marsh. Loggieville (5611); Portage Island (5671). Said to be common by Fowler (p. 56). Specimens are in the Gray Herbarium from Bass River, *Fowler*; St. Andrews, 1900, *Fowler*; Shediac Island, 1914, *Hubbard*.

**QUERCUS RUBRA** L. (of Gray's Man. ed. 7). A single tree in field, Moulies River (5732). The only oak-tree which I met with. Also seen by Prof. Fernald from Richibucto (herb. N. B. Nat. Hist. Soc.). Recorded by Fowler (p. 57) from Kent, Northumberland, and York Counties.

**RUMEX PERSICARIOIDES** L. (See St. John, RHODORA xvii. 80 (1915).) Wet sands back from beach, Miscou Harbor (5577). Determined by Dr. H. St. John.

**POLYGONUM RAII** Bab. (See Fernald, *RHODORA* xv. 71-73 (1913).) Sandy shore of Nepisiguit Bay, Bathurst (5397); sandy beach, Miscou Harbor (5563); a single plant, sea beach, Grande Plaine, Miscou Island (5597); sandy beach, Tracadie (5634). Not seen on the islands in Miramichi Bay.

**CHENOPODIUM RUBRUM** L. Brackish sands, Portage Island (5684).

**ATRIPLEX MARITIMA** E. Hallier. (See Blake, *RHODORA* xvii. 83-86 (1915).) Sand bar and sandy beach, Miscou Harbor (5559, 5565); sea beach, Grande Plaine, Miscou Island (5598); beach, Fox Island (5692).

**SUAEDA AMERICANA** (Pers.) Fernald. The common *Suaeda* of the eastern New Brunswick coast. Of eleven collections of the genus, made at Miscou Harbor, Lameque, Neguac Island, Fox Island, Bay du Vin Island, Richibucto, and Moncton, ten belonged to this species. One of the two collections made at Moncton, however, was of the next species.

**SUAEDA MARITIMA** (L.) Dumort. Moncton (5739).

**ARENARIA PEPLOIDES** L. var. **ROBUSTA** Fernald, *RHODORA* xi. 114 (1909). Tracadie Beach (5650); Portage Island (5679); Fox Island (5695); Bay du Vin Island (5696, 5697); North Beach, Richibucto (5717). Recorded by Fowler (p. 18), under *A. peploides*, as "rare. On sandy shore, Shediac, *Fowler*; Dalhousie, *Ross*; Restigouche, *Chalmers*." Also seen by Prof. Fernald from Kouchibouguac (herb. N. B. Nat. Hist. Soc.), and by the writer from Portage Island, *Cox* (herb. Miramichi Nat. Hist. Soc.).

**MONTIA RIVULARIS** Gmel. (See Fernald & Wiegand, *RHODORA* xii. 138. t. 84. f. b (1910).) Along brook, Chatham, 4 September (5601). First record for the American continent; previously recorded by Fernald & Wiegand from Newfoundland.

**RANUNCULUS PURSHII** Richards. In brook, Petit Rocher (5508). Recorded by Fowler (p. 12) as *R. multifidus* from "ditches at Point de Bute and Belledune"; these specimens have been examined by Prof. Fernald, as have others collected at Bass River, *Fowler*.

[*Draba incana* L. Fowler (p. 15) has the following note regarding this species. "Cambridge, Sept. 14, 1881.—I have just received a specimen of *Draba incana* L., collected by Mr. Charles Lindon of Buffalo, N. Y., in or near Bathurst, N. B.—Serenio Watson." In their revision of the *Drabas* of this group, Fernald & Knowlton (*RHODORA* vii. 64 (1905)) likewise referred these specimens (three stems)

to *D. incana*, recording them as from "near Bathurst." Re-examination by Prof. Fernald, however, has shown them to belong not to *D. incana* but to *D. megasperma* Fernald & Knowlton. This latter species is abundant at Paspébiac Beach, a popular place for holiday excursions across the Bay Chaleur from Bathurst, and Prof. Fernald is inclined to believe that the specimens in question came from that place. In any case, the species should be removed for the present from the list of plants definitely known from New Brunswick.]

DRABA INCANA L. var. CONFUSA (Ehrh.) Pers. Grass plain, Grande Plaine, Miscou Island, 28 August (5590). New to the Gray's Manual range.

SISYMBRIUM OFFICINALE (L.) Scop. Waste ground, Chatham (5737).

TILLAEA AQUATICA L. Brackish tidal mud, French Fort Cove, Miramichi River, Newcastle (5626).

PYRUS ARBUTIFOLIA (L.) L. f. var. ATROPURPUREA (Britton) Robinson. *Ammophila* plain, Portage Island (5678); marsh, Richibucto (5724). A specimen in herb. Miramichi Nat. Hist. Soc., from Bass River, Fowler, recorded as var. *melanocarpa* in Fowler's list (p. 26), also represents this form.

AMELANCHIER STOLONIFERA Wiegand, RHODORA xiv. 144. t. 95. f. 4 (1912). *Ammophila* plain, Portage Island (5677). Determination verified by Prof. K. M. Wiegand.

CRATAEGUS MONOGYNA Jacq. (See RHODORA, xi. 47 (1909).) In field, Richibucto (5735).

CRATAEGUS ROTUNDIFOLIA Moench. Bank of Moulies River, near junction with Richibucto River (5733).

POTENTILLA PALUSTRIS (L.) Scop. forma SUBSERICEA (Becker) Wolf. (See Blake, RHODORA xv. 165 (1913); Fernald & Long, l. c. xvi. 9–10 (1914).) Dampish meadow, Tracadie (5646).

POTENTILLA TRIDENTATA Ait. Pasture, Miscou Harbor (5544). Fowler (p. 26) notes it from "Buctouche, Carleton, Fowler; Sugar Loaf, Restigouche, Chalmers; Nerepis, Upper St. John, Head Waters of Tobique, Douglas Mountain, Hay, Herb., Bulletin II. 32." The species is also in the Gray Herbarium from Casey's Cape, Kent Co., 1914, Hubbard; St. Andrews, 1900, Fowler; dry ledges by St. John R., Connors, 1903, Pease 2947.

EUPHORBIA POLYGONIFOLIA L. Sandy beach, Tracadie Beach (5651). Recorded by Fowler (p. 55) from "Kouchibouguac beach in sand."

HUDSONIA TOMENTOSA Nutt. Neguac Island (5661); Portage Island (5675); Fox Island (5689); Richibucto (5710); Kouchibouguac (5728). Fowler records it (p. 16) as "abundant on Kouchibouguac beach, *Fowler*; Bathurst, *Chalmers*." A specimen from Portage Island, collected by Cox, has been seen by Prof. Fernald in herb. New Brunswick Natural History Society; and material collected by Cox on Portage Island and at Tracadie has been examined by the writer. It is also in the Gray Herbarium from St. Andrews, 1909, *Klugh* 14.

LECHEA INTERMEDIA Leggett. Portage Island (5672); Fox Island (5690); Richibucto (5709); Kouchibouguac (5727). Listed by Fowler (p. 16), as *L. minor*, from "Kouchibouguac Beach, Goat Island in Grand Lake, *Fowler*; *Hay*, Herb.; Hopewell, *Brittain*."

OENOTHERA PUMILA L. var. RECTIPILIS Blake, RHODORA xix. 110 (1917). Type from Petit Rocher (5513). Fowler (p. 29) records *O. pumila* from "Bass River, *Fowler*; near St. John, *Hay*, Herb." The varietal identity of these specimens remains in doubt. Specimens in the Gray Herbarium from Shediac Cape, 1914, *Hubbard*, belong to true *O. pumila*.

CHIMAPHILA UMBELLATA (L.) Barton var. CISATLANTICA Blake, RHODORA xix. 241 (1917). Type from Bathurst (5435). Fowler (p. 43) lists it, under name *C. umbellata*, as common.

KALMIA ANGUSTIFOLIA L. Coniferous woods, Bathurst (5413). A woodland form with leaves somewhat broader than usual, not revolute, and green beneath. I have also collected this form in coniferous woods at Cherryfield, Maine (*Blake* 4000 in part), but have not yet found it fruiting.

LIMONIUM TRICHOGONUM Blake, RHODORA xviii. 61. t. 119, f. E (1916). Type from Loggieville (5624); also collected on Neguac Island (5666). Fowler (p. 44) lists this species, under *Statice Limonium* var. *caroliniana*, as "common in salt marshes round the coast."

SAMOLUS FLORIBUNDUS HBK. Bank of French Fort Cove, Miramichi River, Newcastle (5628). Fowler (p. 45), under *S. Valerandi* var. *americanus*, says: "muddy shore of a small brook at Kouchibouguac, only place I have noticed it." In herb. Miramichi Nat. Hist. Soc., at Chatham, I found specimens from "Salmon Hatchery, N. W. Mir., 1901, *MacIntosh & Cox*."

TEUCRIUM CANADENSE L. var. LITTORALE (Bicknell) Fernald. In sand, Neguac Island, 16 September (5667). First definite record for

New Brunswick. Fowler (p. 52), whose record has not been incorporated in our manuals, lists what was probably this form, as *T. canadense*, from "sand beach, Kouchibouguac."

*GALEOPSIS TETRAHIT* L. (See Fernald & Wiegand, *RHODORA* xii. 141-142 (1910).) Edge of pasture, Bathurst (5466). Corolla white.—The commoner form, var. *bifida* (Boenn.) Lej. & Court., was also collected at Bathurst, in a cultivated field (5479).

*LINARIA MINOR* (L.) Desf. Along Intercolonial Railway Petit Rocher (5487). Recorded by Fowler (p. 10) from "Ballast Wharf, St. John, *Hay*, 1881;" and by Fernald & Wiegand (*RHODORA* xii. 142 (1910)) as abundant at Fairville.

*GALIAM TRIFIDUM* L. var. *HALOPHILUM* Fernald & Wiegand, *RHODORA* xii. 78 (1910). Inner edge of brackish flats, Bathurst (5402); sand bar, sandy beach, and wet sands back of beach, Miscou Harbor (5560, 5575, 5581); sandy beach, Tracadie (5637).

*ASTER LAURENTIANUS* Fernald var. *CONTIGUUS* Fernald, *RHODORA* xvi. 60. t. 109. f. 5 (1914). Type and only known collection from Tracadie (5645).

*ASTER SUBULATUS* Michx. var. *OBTUSIFOLIUS* Fernald, l. c. 61. t. 109. f. 6. Type from Bathurst (5372); also collected there by Williams & Fernald in 1902.

*ANTENNARIA CANADENSIS* Greene. Bathurst (5384). The only *Antennaria* met with.

*ACHILLEA PTARMICA* L. Grassy roadside, Bathurst (5432). Considered by Gray (*Syn. Fl.* i. pt. 2. 363), on the basis of Fowler's specimens (see List, p. 38), as "apparently indigenous in Restigouche and Kent Counties."

*SONCHUS ARVENSIS* L. var. *GLABRESCENS* Wimm. & Grab. (See Fernald & Wiegand, *RHODORA* xii. 145 (1910).) Sandy shore of Nepisiguit Bay, Bathurst (5395).

GRAY HERBARIUM.